
Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

Grant Award Details

Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

Grant Type: Therapeutic Translational Research Projects

Grant Number: TRAN1-09394

Project Objective: Conduct a pre-IND meeting with the FDA.

Investigator:

Name:	Yadong Huang
Institution:	Gladstone Institutes, J. David
Type:	PI

Disease Focus: Alzheimer's Disease, Neurological Disorders

Human Stem Cell Use: iPS Cell

Cell Line Generation: iPS Cell

Award Value: \$1,900,000

Status: Closed

Grant Application Details

Application Title: Human iPSC-derived GABAergic Progenitors for Alzheimer's Disease Treatment

Public Abstract:**Translational Candidate**

Human iPSC-derived GABAergic interneuron progenitors.

Area of Impact

Alzheimer's disease and related conditions.

Mechanism of Action

Transplantation of human iPSC-derived GABAergic progenitors, which will develop into mature GABAergic interneurons, to replace the lost GABAergic interneurons in the hippocampus of AD brains and related disorders.

Unmet Medical Need

As a complex disease that damages the hippocampus, a brain region essential for cognition, Alzheimer's disease presents unique challenges for developing traditional therapies. iPSCs provide a way to generate brain cells for cell-replacement therapy.

Project Objective

Pre-IND

Major Proposed Activities

- Establish a robust differentiation protocol for deriving GABAergic progenitors from human iPSCs.
- Short-term efficacy and safety tests of human iPSC-derived GABAergic interneuron progenitors.
- Long-term efficacy and safety tests of human iPSC-derived GABAergic interneuron progenitors.

Statement of Benefit to California:

Alzheimer's disease (AD) is the leading cause of dementia in California. Currently, there are over 480,000 AD patients in California—more than in any other US state—costing over \$20 billion USD in healthcare each year. This research project focuses on developing cell-replacement therapies for AD. Successful completion of this research could help to improve the health of Californians and reduce the adverse impact of AD, thereby increasing productivity and enhancing quality of life.

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